

MARK D. SCHEUERELL

Curriculum Vitae

ADDRESS

National Marine Fisheries Service
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EDUCATION

| | | |
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| PhD | 2002 | Zoology, University of Washington, Seattle, Washington |
| MS | 1996 | Fisheries and Aquatic Science, Cornell University, Ithaca, New York |
| BS | 1991 | Zoology, University of Wisconsin, Madison, Wisconsin |

PROFESSIONAL EXPERIENCE

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|----------------|---|
| 2003 - present | Research Fisheries Biologist, National Marine Fisheries Service, Northwest Fisheries Science Center, Seattle, Washington |
| 2002 - 2003 | Post-doctoral Fellow, National Marine Fisheries Service, Northwest Fisheries Science Center, and the School of Aquatic and Fishery Sciences, University of Washington |
| 1997 - 2002 | Graduate Research Assistant, Department of Zoology, University of Washington |
| 1999 | Graduate Fellow in Mathematical Biology, College of Arts and Sciences, University of Washington |
| 1996 - 1997 | Research Coordinator, University of Massachusetts and Massachusetts Audubon Society |
| 1993 - 1995 | Graduate Research Assistant, Department of Natural Resources, Cornell University |
| 1992 - 1993 | Research Technician, Cornell University Biological Field Station |
| 1991 - 1992 | Associate Research Specialist, Center for Limnology, University of Wisconsin |

TEACHING EXPERIENCE

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|----------------|---|
| 2005 | Visiting Instructor, University of Washington, <i>Theory and Application of Stable Isotopes in Ecology</i> |
| 1997 - present | Guest Lecturer, University of Washington: <i>Limnology, Mathematical Biology, Conservation and Management of Aquatic Resources, Fisheries Stock Assessment</i> |
| 1999 - 2002 | Undergraduate Research Mentor, Biology Program, University of Washington |
| 1997 - 2000 | Teaching Assistant, University of Washington: <i>Limnology</i> (Fall 2000, Fall 1998), <i>Comparative Vertebrate Anatomy</i> (Winter 1998), <i>Vertebrate Zoology</i> (Fall 1997) |
| 1993 - 1995 | Undergraduate Research Mentor, Department of Natural Resources, Cornell University |

FELLOWSHIPS

National Research Council Postdoctoral Research Associateship: "Estimating the relative role of the environment and density-dependence in controlling Pacific salmon populations." (2003: \$42,500)

Ford Fellowship in Environmental Science: "The impact of lake shoreline development on spatial processes in lake food webs." (2002: \$10,000)

NSF Graduate Research Training Grant in Mathematical Biology: "Integrating spatial dynamics and foraging models: the effect of scale on the functional response of fish." (1999: \$9800)

Electric Power Research Institute Fellowship in Fish Population Biology: "Spatial dynamics of fish populations: implications for predator-prey interactions." (1994-1995: \$44,000)

AWARDS

- 2002 Best Student Presentation, American Fisheries Society Alaska Chapter Annual Meeting, Girdwood, Alaska
- 2001 Best Student Presentation, Aquatic Section, Ecological Society of America Annual Meeting, Madison, Wisconsin
- 2000 Ingrith Deyrup-Olsen Distinguished Teaching Assistant, University of Washington, Department of Zoology
- 1999 Richard C. Snyder Award for Vertebrate Zoology Research, University of Washington, Department of Zoology

PROFESSIONAL ACTIVITIES

a. Society membership

American Fisheries Society (AFS), American Society for Limnology and Oceanography (ASLO), Ecological Society of America (ESA)

b. Editorial responsibilities

manuscript reviewer for *Canadian Journal of Fisheries and Aquatic Sciences*, *Ecological Applications*, *Ecology*, *Ecology Letters*, *Frontiers in Ecology and the Environment*, *North American Journal of Fisheries Management*, *Oecologia*, *Proceedings of the National Academy of Sciences*, *Transactions of the American Fisheries Society*

book reviewer for *Trends in Ecology and Evolution*

PUBLICATIONS

- Scheuerell, MD.** 2005. The influence of juvenile size on the age at maturity of individually-marked wild Chinook salmon. *Transactions of the American Fisheries Society* 134: (in press)
- Zabel, RW, **MD Scheuerell**, MM McClure, and JG Williams. 2005. The interplay between climate variability and density dependence in the population viability of Chinook salmon. *Conservation Biology* 19: (in press)
- Scheuerell, MD** and JG Williams. 2005. Forecasting climate-induced changes in the survival of Snake River spring/summer chinook salmon. *Fisheries Oceanography* 14: (in press)
- Schindler, DE, DE Rogers, **MD Scheuerell**, and CA Abrey. 2005. Effects of changing spring ice phenology on zooplankton and growth of juvenile sockeye salmon in western Alaska. *Ecology* 86: 198-209
- Scheuerell, MD.** 2004. Quantifying aggregation and association in three dimensional landscapes. *Ecology* 85: 2332-2340
- Beauchamp DA, CJ Sergeant, MM Mazur, JM Scheuerell , DE Schindler, **MD Scheuerell**, KL Fresh, DE Seiler, TP Quinn. 2004. Spatial-temporal dynamics of early feeding demand and food supply by sockeye salmon fry in Lake Washington. *Transactions of the American Fisheries Society* 133: 1014-1032
- Scheuerell, MD** and DE Schindler. 2004. Changes in the spatial distribution of fishes in lakes along a residential development gradient. *Ecosystems* 7: 98-106
- Moore, JW, DE Schindler, and **MD Scheuerell**. 2004. Disturbance of freshwater habitats by anadromous salmon in Alaska. *Oecologia* 139: 298-308
- ¹Hilborn, R, TA Branch, B Ernst, A Magnusson, CV Minte-Vera, **MD Scheuerell**, and JL Valero. 2003. State of the world's fisheries. *Annual Review of Environment and Resources* 23: 359-399
- Scheuerell, MD** and DE Schindler. 2003. Diel vertical migration by juvenile sockeye salmon: empirical evidence for the antipredation window. *Ecology* 84: 1713-1720
- Schindler, DE, **MD Scheuerell**, JW Moore, SM Gende, TB Francis, WJ Palen. 2003. Pacific salmon and the ecology of coastal ecosystems. *Frontiers in Ecology and the Environment* 1: 31-37

¹All junior authors listed in alphabetical order.

- Moore, JW, DE Schindler, **MD Scheuerell**, D Smith, and J Frodge. 2003. Lake eutrophication at the urban fringe. *AMBIO* 32: 13-18
- Scheuerell, MD**, DE Schindler, AH Litt, and WT Edmondson. 2002. Environmental and algal forcing of *Daphnia* production dynamics. *Limnology and Oceanography* 47: 1477-1485
- Schindler, DE and **MD Scheuerell**. 2002. Habitat coupling in lake ecosystems. *Oikos* 98: 177-189
- Rudstam, LG, A Van de Valk, and **MD Scheuerell**. 2002. Comparison of acoustic and standard estimates of larval fish abundance in Oneida Lake, New York. *Fisheries Research* 57: 145-154
- Delany, MF, TC Lockley, B Pranty, and **MD Scheuerell**. 2000. Stomach contents of two nestling Florida Grasshopper Sparrows. *Florida Field Naturalist* 28: 75-77
- Perkins, DW, PD Vickery, TF Dean, and **MD Scheuerell**. 1998. Nesting records and reproductive success of Florida Grasshopper Sparrows (*Ammodramus savannarum floridanus*). *Florida Field Naturalist* 26: 7-17.
- Pranty, B and **MD Scheuerell**. 1997. First summer record of the Henslow's Sparrow in Florida. *Florida Field Naturalist* 25: 64-66
- Mills, EL, **MD Scheuerell**, JT Carlton and DL Strayer. 1997. Biological invasions in the Hudson River: an inventory and historical analysis. *Bulletin of the New York State Museum*: 57: 1-51
- Mills, EL, DL Strayer, **MD Scheuerell** and JT Carlton. 1996. Exotic species in the Hudson River basin: a history of invasions and introductions. *Estuaries* 19: 814-823
- ²He, X, **M Scheurell**, PA Soranno and RA Wright. 1994. Recurrent response patterns of a zooplankton community to whole-lake fish manipulation. *Freshwater Biology* 32: 61-72
- Dini, ML, PA Soranno, **MD Scheuerell** and SR Carpenter. 1993. Effects of predators and food supply on diel vertical migration of *Daphnia*. Pp. 153-171 In: SR Carpenter and JF Kitchell (Eds.) *The Trophic Cascade in Lakes*. Cambridge University Press, Cambridge, England.

IN REVIEW

- Scheuerell, MD**, R Hilborn, MH Ruckelshaus, KK Bartz, K Lageux, A Hass, and K Rawson. SHIRAZ: a model framework for incorporating fish-habitat relationships in conservation planning. *Canadian Journal of Fisheries and Aquatic Sciences*
- Bartz, KK, K Lagueux, **MD Scheuerell**, TJ Beechie, and MH Ruckelshaus. Translating alternative landuse scenarios into population model inputs: a first step in evaluating salmon recovery strategies. *Canadian Journal of Fisheries and Aquatic Sciences*
- Scheuerell, JM, DE Schindler, **MD Scheuerell**, KL Fresh, AH Litt, JA Shepherd, and T Sibley. 2005. Temporal dynamics in the foraging behaviour of a pelagic predator. *Canadian Journal of Fisheries and Aquatic Sciences*
- Romare, P, DE Schindler, **MD Scheuerell**, JM Scheuerell, AH Litt, and JH Shepherd. Variation in spatial and temporal gradients in zooplankton spring development: the effect of climatic factors. *Freshwater Biology*

PRESENTED PAPERS (INTER- & NATIONAL)

- Scheuerell, MD**, PS Levin, RW Zabel, JG Williams, and S Achord. "Anthropogenic causes of a state shift in a large river ecosystem: Chinook salmon and the Snake River basin." American Society of Limnology and Oceanography Aquatic Sciences Meeting, February 20-25, 2005, Salt Lake City, UT.
- ³**Scheuerell, MD**. "The role of climate variability in structuring the population dynamics of Snake River spring/summer Chinook salmon." Climate Impacts on Salmon Management and Recovery in the Pacific Northwest: The Columbia River Basin, September 21, 2004, Portland, OR.
- Scheuerell, MD** and JG Williams. "Forecasting climate-induced changes in the survival of Pacific salmon." Annual Meeting of the Ecological Society of America, August 1-6, 2004, Portland, OR.

²My last name was misspelled on final printing.

³Invited presentation.

- ³**Scheuerell, MD.** “Tipping the scales: balancing natural and human impacts on lakes.” American Society of Limnology and Oceanography DIALOG Symposium, October 19-25, 2003, Bermuda Biological Station for Research.
- Scheuerell, MD, JW Moore, and DE Schindler.** “Differential impacts of anadromous salmon on resident stream fishes in SW Alaska.” American Society of Limnology and Oceanography Aquatic Sciences Meeting, February 8-14, 2003, Salt Lake City, UT.
- ³**Scheuerell, MD** and R Hilborn. “A model framework for relating life-history, freshwater habitat, and the ocean environment to Pacific salmon production and capacity.” American Fisheries Society Alaska Chapter Annual Meeting, October 21-24, 2002, Girdwood, AK.
- ³**Scheuerell, MD** and DE Schindler. “Impacts of lakeshore residential development on the spatial distribution and energy sources of fishes.” American Society of Limnology and Oceanography Aquatic Sciences Meeting, June 10-14, 2002, Victoria, BC.
- Scheuerell, MD** and DE Schindler. “Effect of incident light on the diel vertical migration of juvenile sockeye salmon in Alaska lakes.” Annual Meeting of the Ecological Society of America, August 6-11, 2001, Madison, WI
- Scheuerell, MD.** “Temporal variability in physical-chemical coupling to algal quality and zooplankton production dynamics.” Annual Meeting of the Ecological Society of America, August 6-10, 2000, Snowbird, UT.
- Scheuerell, MD** and DE Schindler. “The extent of spatial aggregation of predators and prey in lakes.” American Society of Limnology and Oceanography Aquatic Sciences Meeting, February 1-5, 1999, Santa Fe, NM.
- Scheuerell, MD** and DE Schindler. “Cumulative human effects alter the spatial interactions among fishes.” Annual Meeting of the Ecological Society of America, August 8-12, 1999, Spokane, WA.